WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Johnsonville LLC

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at

N6927 Johnsonville Way, Town of Sheboygan Falls, WI

to

The Sheboygan River (Sheboygan River Basin) in Sheboygan County and Approved Land Application Sites

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Bryan Hartsook
Wastewater Field Supervisor

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - April 01, 2022 **EXPIRATION DATE - March 31, 2027**

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
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702	Influent to WWTP 1 (Countryside)
703	Influent to WWTP 2 (Meadowside)

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 702 - WWTP 1 Influent and 703- WWTP 2 Influent

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	

2 Surface Water Requirements

2.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
002	COMBINED WWTP EFFLUENT: Discharge of treated noncontact cooling water, cooling tower and boiler blowdown, and sanitary wastewaters and sausage manufacturing process wastewaters from WWTP 1 (Countryside) and WWTP 2 (Meadowside) treatment plants. Treated wastewaters from WWTP 1 and WWTP 2 are combined prior to UV disinfection. Representative samples shall be collected prior to discharging to the Sheboygan River via Outfall 002.
003	COMBINED NCCW AND STORM WATER: Discharge of noncontact cooling water from the Riverside Production Facility combined with rooftop runoff. Representative samples shall be collected prior to discharging to the Sheboygan River via Outfall 003.
010	FIRE SUPPRESSION SYSTEM: Intermittent, non-potable low-volume discharge from fire suppression system testing and maintenance hydrant flushing occurring at approximately twelve locations located across facility grounds. Remaining flow after evaporation discharges to storm sewer.

2.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point (Outfall) 002 - COMBINED DISCHARGE

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Continuous	
BOD_5, Total		mg/L	3/Week	24-Hr Flow Prop Comp	
BOD_5, Total	Daily Max	464 lbs/day	3/Week	Calculated	
BOD_5, Total	Weekly Avg	262 lbs/day	3/Week	Calculated	Limit effective March through May each year.
BOD_5, Total	Weekly Avg	88 lbs/day	3/Week	Calculated	Limit effective June through November each year.
BOD_5, Total	Weekly Avg	219 lbs/day	3/Week	Calculated	Limit effective December through February each year.
BOD_5, Total	Monthly Avg	232 lbs/day	3/Week	Calculated	Limit effective March through May each year.
BOD_5, Total	Monthly Avg	88 lbs/day	3/Week	Calculated	Limit effective June through November each year.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
BOD_5, Total	Monthly Avg	219 lbs/day	3/Week	Calculated	Limit effective December through February each year.
Suspended Solids, Total		mg/L	2/Week	24-Hr Flow Prop Comp	
Suspended Solids, Total	Daily Max	564 lbs/day	2/Week	Calculated	
Suspended Solids, Total	Monthly Avg	282 lbs/day	2/Week	Calculated	
Phosphorus, Total	Monthly Avg	1.0 mg/L	Weekly	24-Hr Flow Prop Comp	This is an interim MDV limit effective through September 30, 2023. See the MDV/Phosphorus sections and phosphorus schedules.
Phosphorus, Total	Monthly Avg	0.8 mg/L	Weekly	24-Hr Flow Prop Comp	This is an interim MDV limit effective on October 1, 2023. See the MDV/Phosphorus subsections and phosphorus schedules.
Phosphorus, Total		lbs/month	Weekly	Calculated	Report the total monthly phosphorus discharged in lbs/month on the last day of the month on the DMR. See Standard Requirements for 'Appropriate Formulas' to calculate the Total Monthly Discharge in lbs/month.
Phosphorus, Total		lbs/yr	Weekly	Calculated	Report the sum of the total monthly discharges (for the months that the MDV is in effect) for the calendar year on the Annual report form.
Oil & Grease (Hexane)		mg/L	Monthly	Grab	
Oil & Grease (Hexane)	Daily Max	166 lbs/day	Monthly	Calculated	
Oil & Grease (Hexane)	Monthly Avg	83 lbs/day	Monthly	Calculated	
pH Field	Daily Max	9.0 su	5/Week	Grab	
pH Field	Daily Min	6.0 su	5/Week	Grab	
Chlorine, Total Residual		µg/L	Monthly	Grab	Monitoring only October 1, 2025 through September 30, 2026.
Temperature Maximum		deg F	Monthly	Grab	Monitoring only October 1, 2025 through September 30, 2026.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Fecal Coliform	Daily Max	400 #/100 ml	Monthly	Grab	Best Practicable Technology (BPT) limit effective year-round.
Fecal Coliform	Geometric Mean - Monthly	400 #/100 ml	Weekly	Grab	Limit effective May through September annually until the final E. coli limit goes into effect per the 'Effluent Limitations for E. coli' Schedule.
E. coli		#/100 ml	Weekly	Grab	Monitoring only May through September annually until the final E. coli limit goes into effect per the 'Effluent Limitations for E. coli' Schedule.
E. coli	Geometric Mean - Monthly	126 #/100 ml	Weekly	Grab	Limit effective May through September annually per the 'Effluent Limitations for E. coli' Schedule.
E. coli	% Exceedance	10 Percent	Monthly	Calculated	Limit effective May through September annually per the 'Effluent Limitations for E. coli' Schedule. See the E. coli Percent Limit section below. Enter the result in the DMR on the last day of the month.
Nitrogen, Ammonia (NH_3-N) Total	Daily Max	8.0 mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Ammonia (NH_3-N) Total	Monthly Avg	4.0 mg/L	Weekly	24-Hr Flow Prop Comp	
Nitrogen, Total	Daily Max	194 mg/L	Quarterly	24-Hr Flow Prop Comp	
Nitrogen, Total	Monthly Avg	134 mg/L	Quarterly	24-Hr Flow Prop Comp	
Chloride	Daily Max	1,500 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective March through May each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Chloride	Daily Max	1,100 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective December through February each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Daily Max	1,300 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective June through November each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Weekly Avg	1,500 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective March through May each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Weekly Avg	860 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective June through November each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Weekly Avg	990 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective December through February each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Monthly Avg	1,500 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective March through May each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Chloride	Monthly Avg	860 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective June through November each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Monthly Avg	990 mg/L	4/Month	24-Hr Flow Prop Comp	Limit effective December through February each year. Monitoring is year-round. Sampling shall be done on four consecutive days each month. See chloride section below.
Chloride	Weekly Avg	6,230 lbs/day	4/Month	Calculated	Limit effective March through May each year. Monitoring is year-round. Chloride mass discharge shall be calculated using the daily concentration (mg/L) x daily flow (MGD) x 8.34. See Chloride subsection below.
Chloride	Weekly Avg	3,230 lbs/day	4/Month	Calculated	Limit effective June through November each year. Monitoring is year-round. Chloride mass discharge shall be calculated using the daily concentration (mg/L) x daily flow (MGD) x 8.34. See Chloride subsection below.
Chloride	Weekly Avg	3,720 lbs/day	4/Month	Calculated	Limit effective December through February each year. Monitoring is year-round. Chloride mass discharge shall be calculated using the daily concentration (mg/L) x daily flow (MGD) x 8.34. See Chloride subsection below.
Acute WET		TU_a	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annually in rotating quarters. See 'WET' section below.

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Chronic WET	Monthly Avg	4.0 TUc	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annually in rotating quarters. See 'WET' section below.

2.2.1.1 *E. coli* Percent Limit

No more than 10 percent of *E. coli* bacteria samples collected in any calendar month may exceed 410 #/100 ml. Bacteria samples may be collected more frequently than required. All samples shall be reported on the monthly discharge monitoring reports (DMRs). The following calculation should be used to calculate percent exceedances.

$$\frac{\#\ of\ Samples\ greater\ than\ 410\ \#/100}{Total\ \#\ of\ samples} \times 100 = \%\ Exceedance$$

2.2.1.2 Total Maximum Daily Load (TMDL) Limitations

TMDL Under Development: A Total Maximum Daily Load (TMDL) is being developed for the Sheboygan River Basin to address water quality impairments within the Northeast Lakeshore TMDL area. This TMDL will likely result in limitations for phosphorus and total suspended solids that must be included in WPDES permits, which may be different than those calculated for this permit reissuance. TMDL-derived limits may be included in lieu of or in addition to the calculated limits upon permit reissuance or modification once the TMDL has been approved by U.S. EPA, according to s. NR 217.16, Wis. Adm. Code.

2.2.1.3 MDV (Multi-Discharger Variance) Requirements

Optimization: The permittee shall continue to optimize] performance to control phosphorus discharges in accordance with s. 283.16(6), Wis. Stats. See the Schedules section for optimization requirements.

Watershed Provisions: The permittee is required to implement watershed measures to reduce the amount of phosphorus entering the receiving water. The permittee has selected the following approved watershed measure.

Payment to County for Phosphorus Reduction: The permittee shall make payments for phosphorus reduction to the county or counties approved by the Department per s. 283.16(8), Wis. Stats. The permittee shall make a total payment by March 1 of each year in the amount equal to the per pound amount of $58.85 times the number of pounds by which the effluent phosphorus discharged during the previous year exceeded the permittee's target value or $640,000, whichever is less. The target value is 0.2 mg/L per s. 283.16(1)(h), Wis. Stats., and is applicable during the months that the MDV is in effect. The MDV is in effect year-round Refer to the Schedules section for the scheduled annual requirements.

Annual Payment Calculation: The annual payment is equal to the phosphorus load that exceeds the target value multiplied by **$58.85** per pound. Use the steps shown below to calculate the annual payment. In addition, the Department shall send a statement to the permittee specifying total payment due to the participating counties each year in accordance with the Schedules section.

Annual Payment = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound
Calculation Steps:

●Calculate pounds of phosphorus discharged for each month that the MDV is in effect:

Monthly Phosphorus Load (lbs/month) = Total Monthly Flow (MG) × Monthly Avg. TP effluent conc. (mg/L) × 8.34

●Sum the lbs/month discharged for the months that the MDV is in effect to calculate the annual phosphorus load:

Annual Phosphorus Load (lbs/year) = ∑ [Monthly Phosphorus Load (lbs/month)]

●Calculate the Target Load (lbs/month) for each month that the MDV is in effect.

Target Value = 0.2 mg/L:
Monthly Target Load (lbs/month) = Total Monthly Flow (MG) × 0.2 mg/L × 8.34

Target Value = TMDL Derived Limit [ENTER Monthly Average Phosphorus Limit in lbs/day]
Monthly Target Load (lbs/month) = Monthly Average Phosphorus Limit (lbs/day) × Number of Days in the Month

●Sum the lbs/month for the months that the MDV is in effect to calculate the Annual Target Load:

Annual Target Load (lbs/year) = ∑ [Monthly Target Load (lbs/month)]

●Calculate the annual payment:
Annual Payment ($) = [Annual Phosphorus Load – Annual Target Load] × Price Per Pound

2.2.1.4 Chloride Sample Collection

Samples for chloride shall be taken on 4 consecutive days of the month.

2.2.1.5 Effluent Temperature Monitoring

For manually measuring effluent temperature, grab samples should be collected at 6 evenly spaced intervals during the 24-hour period. Alternative sampling intervals may be approved if the permittee can show that the maximum effluent temperature is captured during the sampling interval. Report the maximum temperature measured during the day on the DMR. For more information see the Standard Requirements section in this permit.

2.2.1.6 Water Treatment Additives

The permittee shall maintain a record of the dosage rate of all water treatment additives used on a monthly basis. The water treatment additives may be changed during the term of this permit following procedures in the 'Additives' subsection of the Standard Requirements.

2.2.1.7 Whole Effluent Toxicity (WET) Testing

Primary Control Water: Sheboygan River, upstream and outside of the mixing zone and any other known discharge

Instream Waste Concentration (IWC): 25%

Dilution series: At least five effluent concentrations and dual controls must be included in each test.

- **Acute:** 100, 50, 25, 12.5, 6.25% and any additional selected by the permittee.
- **Chronic:** 100, 30, 10, 3, 1% and any additional selected by the permittee.

WET Testing Frequency:

Acute & Chronic tests shall be conducted once each year in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters.:

- **Acute & Chronic:** July – September 2022; October – December 2023; January – March 2024; April – June 2025; and July -September 2026

Acute and Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the last full calendar year of this permit. For example, the next test would be required in the 3rd Quarter of 2027.

Testing: WET testing shall be performed during normal operating conditions. Permittees are not allowed to turn off or otherwise modify treatment systems, production processes, or change other operating or treatment conditions during WET tests.

Reporting: The permittee shall report test results on the Discharge Monitoring Report form, and also complete the "Whole Effluent Toxicity Test Report Form" (Section 6, "*State of Wisconsin Aquatic Life Toxicity Testing Methods Manual, 2nd Edition*"), for each test. The original, complete, signed version of the Whole Effluent Toxicity Test Report Form shall be sent to the Biomonitoring Coordinator, Bureau of Water Quality, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921, within 45 days of test completion. The Discharge Monitoring Report (DMR) form shall be submitted electronically by the required deadline.

Determination of Positive Results: An acute toxicity test shall be considered positive if the Toxic Unit - Acute (TU_a) is greater than 1.0 for either species. The TU_a shall be calculated as follows: $TU_a = 100 \div LC_{50}$. A chronic toxicity test shall be considered positive if the Toxic Unit - Chronic (TU_c) is greater than 4.0 for either species. The TU_c shall be calculated as follows: $TU_c = 100 \div IC_{25}$.

Additional Testing Requirements: Within 90 days of a test which showed positive results, the permittee shall submit the results of at least 2 retests to the Biomonitoring Coordinator on "Whole Effluent Toxicity Test Report Forms". The 90-day reporting period shall begin the day after the test which showed a positive result. The retests shall be completed using the same species and test methods specified for the original test (see the Standard Requirements section herein).

2.2.2 Sampling Point (Outfall) 003 - NONCONTACT COOLING WATER

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Monthly	Estimated	See 'Flow Rate' section.
Phosphorus, Total		mg/L	Monthly	Grab	Monitoring only October 1, 2024 through September 30, 2026.
Chlorine, Total Residual		µg/L	Monthly	Grab	Monitoring only October 1, 2025 through September 30, 2026.

2.2.2.1 Water Treatment Additives

The permittee shall maintain a record of the dosage rate of all water treatment additives used on a monthly basis. The water treatment additives may be changed during the term of the permit following procedures in the 'Additives' subsection of the Standard Requirements.

2.2.3 Sampling Point (Outfall) 010 - FIRE SUPPRESSION WATER

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Volume		gal/qtr	Quarterly	Total Quarterly	

2.2.3.1 Erosion and Sediment Control

The discharge flow rate shall be controlled along the flow path, at the end of pipe, and within the receiving water to prevent erosion and the addition of sediment or turbidity from entering the receiving water.

2.2.3.2 Visual Inspection Log

The permittee shall conduct visual inspections and record observations of the discharge in a visual inspection log during flushing or hydrostatic testing events. The permittee shall record any obvious indicators of pollution (e.g. color, odor, floating solids, or foam) in the log. If any indicators of pollution are observed in the discharge, the permittee shall cease discharge until the pollution is corrected.

3 Land Application Requirements

3.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
005	Combined thickened sludge from WWTP 1 (Countryside) and WWTP 2 (Meadowside) and land applied or hauled to another permitted facility for further treatment and/or final disposal. Representative samples shall be collected of thoroughly mixed sludge. Test results shall be reported on Form 3400-49 'Waste Characteristics Report'. The permittee is required to submit form 3400-52 'Other Methods of Disposal or Distribution Report' by January 31 following each year.
006	Process grease collected from traps at Meadowside 1 and 3; and Riverside hauled to another permitted facility for further treatment and/or final disposal. The permittee is required to submit form 3400-52 'Other Methods of Disposal or Distribution Report' by January 31 following each year.
007	Meadowside WWTP influent hauled to another permitted facility for treatment and/or final disposal. The permittee is required to submit form 3400-52 'Other Methods of Disposal or Distribution Report' by January 31 following each year.
008	Water softener regeneration brine water associated with well water treatment hauled to another permitted facility for further treatment and/or final disposal. The permittee is required to submit form 3400-52 'Other Methods of Disposal or Distribution Report' by January 31 following each year.
009	Process grease intercepted at WWTP 1 (Countryside) in-plant grease trap hauled to another permitted facility for further treatment and/or final disposal. Septage waste passes through grease trap. The permittee is required to submit form 3400-52 'Other Methods of Disposal or Distribution Report' by January 31 following each year.

3.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 005 - WWTPs Combined Sludge

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Grab	
BOD_5, Total		Percent	Quarterly	Grab	
pH Field		su	Quarterly	Grab	
Chloride		Percent	Quarterly	Grab	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab	
Nitrogen, Ammonium (NH_4-N) Total		Percent	Quarterly	Grab	
Phosphorus, Total		Percent	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	
Arsenic Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Cadmium Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Copper Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Lead Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Mercury Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Molybdenum Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Nickel Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Selenium Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.
Zinc Dry Wt		mg/kg	Annual	Grab Comp	Monitoring in years 2022 and 2024 only.

Other Sludge Requirements	
Sludge Requirements	**Sample Frequency**
List 1 Requirements – Pathogen Control: The requirements in List 1 shall be met prior to land application of sludge	**Annual**
List 2 Requirements – Vector Attraction Reduction: The requirements in List 2 shall be met prior to or at the time of land application.	**Annual**

Daily Log – Monitoring Requirements and Limitations

All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.

Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Application Rate	-	Gal/Acre/Day	Daily	Calculated

Annual Report – Summary of Monitoring Requirements and Limitations
The Annual Report is due by January 31st of each year for the previous calendar year. See the 'Annual Land Application Report' subsection in Standard Requirements.

Parameters	Limit	Units	Reporting Frequency	Sample Type
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

List 1
PATHOGEN CONTROL FOR SLUDGE
The permittee shall implement pathogen control as listed in List 1. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control. The following requirements shall be met prior to land application of sludge.

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	

***The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

List 2
VECTOR ATTRACTION REDUCTION
The permittee shall implement any one of the vector attraction reduction options specified in List 2. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option. One of the following shall be satisfied prior to, or at the time of land application as specified in List 2.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged

List 2 VECTOR ATTRACTION REDUCTION The permittee shall implement any one of the vector attraction reduction options specified in List 2. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option. One of the following shall be satisfied prior to, or at the time of land application as specified in List 2.		
Option	**Limit**	**Where/When it Shall be Met**
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

3.2.1.1 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.1.2 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

3.2.2 Sampling Point (Outfall) 006 - Process Grease Interceptors

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Annual	Grab Comp	
Phosphorus, Total		lb/1000gal	Annual	Grab Comp	
Nitrogen, Total		lb/1000gal	Annual	Grab Comp	

3.2.2.1 Sampling Requirements

Sampling is only required when the waste is hauled and discharged to permitted manure pit(s) or manure digestor(s) during any year.

3.2.2.2 Sample Type

The permittee may take a grab sample of the process grease from each grease interceptor of equal volume and combine them into one composite sample to be analyzed. Alternatively, the permittee may take an individual grab sample of each grease interceptor of equal volume and have each sample analyzed and the results averaged together.

3.2.2.3 Analytical Results

The permittee shall provide the analytical results annually to the owner(s) of the permitted manure pit(s) and manure digestor(s).

3.2.2.4 Reporting of Disposal

The permittee shall continue to report the total annual volume of process grease hauled to another facility, land filled, incinerated, or discharged to an approved manure pit on Form 3400-052 (Other Methods of Disposal or Distribution Report).

3.2.2.5 Landspreading or Discharge to Another Manure Pit(s) Approval

The permittee shall receive approval from the department to landspread process grease to department approved sites or discharging to another manure pit(s) (non-permitted or permitted). The permittee must demonstrate that the process grease has no detrimental effects on the soils, vegetation or groundwater of a landspreading system. The permittee shall also request a permit modification to include land spreading limits and monitoring requirements based on ch. NR 214, Wis. Adm. Code.

3.2.3 Sampling Point (Outfall) 007 – Meadowside Influent Disposal; 008 – Regeneration Brine Water; 009 – Countryside WWTF Grease Trap

3.2.3.1 Reporting of Disposal

The permittee shall report the total annual volume of Outfalls 007, 008, and 009 hauled to another facility, landfilled, or incinerated on Form 3400-052 (Other Methods of Disposal or Distribution Report).

3.2.3.2 Landspreading or Discharge to Manure Pit(s) Approval

The permittee shall receive approval from the department to landspread or store any of the wastes associated with Outfalls 007, 008, or 009 to department approved sites or manure pit(s). The permittee must demonstrate that the industrial waste has no detrimental effects on the soils, vegetation or groundwater of a landspreading system. The permittee shall also request a permit modification to include land spreading limits and monitoring requirements based on ch. NR 214, Wis. Adm. Code.

Daily Log – Monitoring Requirements and Limitations
All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.

Parameters	Limit	Units	Sample Frequency	Sample Type
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated

Annual Report – Summary of Monitoring Requirements and Limitations The Annual Report is due by January 31st of each year for the previous calendar year. See the 'Annual Land Application Report' subsection in Standard Requirements.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated

3.2.3.3 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.3.4 Biennial Site Chloride Loading

For details on chloride requirements see the "Chloride Requirements for Liquid Wastes and By-Product Solids" paragraph in the Standard Requirements section of this permit.

4 Schedules

4.1 Phosphorus Schedule - Continued Optimization

The permittee is required to optimize performance to control phosphorus discharges per the following schedule.

Required Action	Due Date
Optimization: The permittee shall continue to implement the optimization plan as previously approved to optimize performance to control phosphorus discharges. Submit a progress report on optimizing removal of phosphorus by the Due Date.	03/31/2023
Progress Report #2: Submit a progress report on optimizing removal of phosphorus.	03/31/2024
Progress Report #3: Submit a progress report on optimizing removal of phosphorus.	03/31/2025
Progress Report #4: Submit a progress report on optimizing removal of phosphorus.	03/31/2026
Progress Report #5: Submit a progress report on optimizing removal of phosphorus.	03/31/2027

4.2 Phosphorus Payment per Pound to County

The permittee is required to make annual payments for phosphorus reductions to the participating county or counties in accordance with s. 283.16(8), Wis. Stats, and the following schedule. The price per pound will be set at the time of permit reissuance and will apply for the duration of the permit.

Required Action	Due Date
Annual Verification of Phosphorus Payment to County: The permittee shall make a total payment to the participating county or counties approved by the Department by March 1 of each calendar year. The amount due is equal to the following: [lbs of phosphorus discharged minus the permittee's target value times $58.85] or $640,000, whichever is less. See the payment calculation steps in the Surface Water section. The permittee shall submit Form 3200-151 to the Department by March 1 of each calendar year indicating total amount remitted to the participating counties to verify that the correct payment was made. The first payment verification form is due by the specified Due Date. Note: The applicable Target Value is 0.2 mg/L as defined by s. 283.16(1)(h), Wis. Stats. The "per pound" value is $50.00 adjusted for CPI.	03/01/2023
Annual Verification of Payment #2: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2024
Annual Verification of Payment #3: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2025
Annual Verification of Payment #4: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2026
Annual Verification of Payment #5: Submit Form 3200-151 to the Department indicating total amount remitted to the participating counties.	03/01/2027
Continued Coverage: If the permittee intends to seek a renewed variance, an application for the MDV (Multi Discharger Variance) shall be submitted as part of the application for permit reissuance in accordance with s. 283.16(4)(b), Wis. Stats.	
Annual Verification of Payment After Permit Expiration: In the event that this permit is not	

reissued prior to the expiration date, the permittee shall continue to submit Form 3200-151 to the Department indicating total amount remitted to the participating counties by March 1 each year.	

4.3 Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L)

This compliance schedule requires the permittee to achieve compliance with the specified MDV interim effluent limit in accordance with s. 283.16(6), Wis. Stats., by the due date.

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent discharges of phosphorus with conclusions regarding compliance.	03/31/2022
Complete Actions: Complete actions identified in the plan and achieve compliance with the specified interim effluent limit.	09/30/2023

4.4 Effluent Limitations for E. coli

The permittee shall comply with surface water limitations for E. coli as specified. No later than 14 days following each compliance date, the permittee shall notify the Department in writing of its compliance or noncompliance. If a submittal is required, a timely submittal fulfills the notification

Required Action	Due Date
Status Update: The permittee shall submit information within the discharge monitoring report (DMR) comment section documenting the steps taken in preparation for properly monitoring and testing for E. coli including, but not limited to, selected test method and location of sampling.	05/21/2022
Operational Evaluation Report: The permittee shall prepare and submit an Operational Evaluation Report to the Department for review and approval. The report shall include an evaluation of collected effluent data and proposed operational improvements that will optimize efficacy of disinfection at the treatment plant during the period prior to complying with final E. coli limitations and, to the extent possible, enable compliance with the final E. coli limitations. The report shall include a plan and schedule for implementation of the operational improvements. These improvements shall occur as soon as possible, but not later than April 30, 2023. The report shall state whether the operational improvements are expected to result in compliance with the final E. coli limitations. The permittee shall implement the operational improvements in accordance with the approved plan and schedule specified in the Operational Evaluation Report and in no case later than April 30, 2023. If the Operational Evaluation Report concludes that the operational improvements are expected to result in compliance with the final E. coli limitations, the permittee shall comply with the final E. coli limitations by April 30, 2023 and the permittee is not required to comply with subsequent milestones identified below in this compliance schedule (‘Submit Facility Plan’, 'Final Plans and Specifications', 'Treatment Plant Upgrade to Meet Limitations', ‘Construction Upgrade Progress Report’, 'Complete Construction', 'Achieve Compliance'). FACILITY PLAN - If the Operational Evaluation Report concludes that operational improvements alone are not expected to result in compliance with the final E. coli limitations, the permittee shall initiate development of a facility plan for meeting final E. coli limitations and comply with the	11/30/2022

remaining required actions in this schedule of compliance. If the Department disagrees with the conclusion of the report, and determines that the permittee can achieve final E. coli limitations using the existing treatment system with only operational improvements, the Department may reopen and modify the permit to include an implementation schedule for achieving the final E. coli limitations sooner than April 30, 2026.	
Submit Facility Plan: If the Operational Evaluation Report concluded that the permittee cannot achieve final E. coli limitations with operational improvements alone, the permittee shall submit a Facility Plan per s. NR 110.09, Wis. Adm. Code. The permittee may submit an abbreviated facility plan if the Department determines that the modifications are minor.	04/30/2023
Final Plans and Specifications: The permittee shall submit final construction plans to the Department for approval pursuant to ch. NR 108, Wis. Adm. Code, specifying treatment plant upgrades that must be constructed to achieve compliance with final E. coli limitations and a schedule for completing construction of the upgrades by the complete construction date specified below.	03/31/2024
Treatment Plant Upgrade to Meet Limitations: The permittee shall initiate bidding, procurement, and/or construction of the project. The permittee shall obtain approval of the final construction plans and schedule from the Department pursuant to s. 281.41. Stats., prior to initiating activities defined as construction under ch. NR 108, Wis. Adm. Code. Upon approval of the final construction plans and schedule by the Department pursuant to s. 281.41, Stats., the permittee shall construct the treatment plant upgrades in accordance with the approved plans and specifications.	09/30/2024
Construction Upgrade Progress Report: The permittee shall submit a progress report on construction upgrades.	09/30/2025
Complete Construction: The permittee shall complete construction of wastewater treatment system upgrades.	03/31/2026
Achieve Compliance: The permittee shall achieve compliance with final E. coli limitations.	04/30/2026

5 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

5.1 Reporting and Monitoring Requirements

5.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a responsible executive or officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

5.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

5.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

5.1.4 Fecal Coliform

The monthly limit for fecal coliform shall be expressed as a geometric mean. In calculating the geometric mean, a value of 1 is used for any result of 0.

5.1.5 *E. coli*

The monthly limit for *E. coli* shall be expressed as a geometric mean. In calculating the geometric mean, a value of 1 is used for any result of 0.

5.1.6 Seasonal Disinfection (*E. coli*)

Disinfection to protect recreational uses shall be provided from May 1 through September 30 of each year. Monitoring requirements and the limitations for *E. coli* apply only during the period in which disinfection is required. Whenever chlorine is used for disinfection or other uses, the limitations and monitoring requirements for residual chlorine shall apply. A dechlorination process shall be in operation whenever chlorine is used.

5.1.7 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a "0" (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

- If no discharge occurs through an outfall, flow related parameters (e.g. flow rate, hydraulic application rate, volume, etc.) should be reported as "0" (zero) at the required sample frequency specified for the outfall. For example: if the sample frequency is daily, "0" would be reported for any day during the month that no discharge occurred.

5.1.8 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic data records for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

5.1.9 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

5.1.10 Reporting Requirements – Alterations or Additions

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:

- The alteration or addition to the permitted facility may meet one of the criteria for determining whether a facility is a new source.
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification requirement applies to pollutants which are not subject to effluent limitations in the existing permit.
- The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use of disposal sites not reported during the permit application process nor reported pursuant to an approved land application plan. Additional sites may not be used for the land application of sludge until department approval is received.

5.2 System Operating Requirements

5.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003**.

5.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

5.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

5.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

5.2.5 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this

permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

5.2.6 Operator Certification

The wastewater treatment facility shall be under the direct supervision of a state certified operator. In accordance with s. NR 114.53, Wis. Adm. Code, every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. Note that s. NR 114.52(22), Wis. Adm. Code, lists types of facilities that are excluded from operator certification requirements (i.e. private sewage systems, pretreatment facilities discharging to public sewers, industrial wastewater treatment that consists solely of land disposal, agricultural digesters and concentrated aquatic production facilities with no biological treatment).

5.2.7 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

5.2.8 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

5.2.9 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

5.3 Surface Water Requirements

5.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the

lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

5.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

5.3.3 Effluent Temperature Requirements

Weekly Average Temperature – If temperature limits are included in this permit, Weekly Average Temperature shall be calculated as the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock pursuant to Wis. Adm. Code, s. NR 102.28. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state pursuant to Wis. Adm. Code, s. NR 102.29.

5.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

5.3.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

5.3.6 Total Residual Chlorine Requirements (When De-Chlorinating Effluent)

Test methods for total residual chlorine, approved in ch. NR 219 - Table B, Wis. Adm. Code, normally achieve a limit of detection of about 20 to 50 micrograms per liter and a limit of quantitation of about 100 micrograms per liter. Reporting of test results and compliance with effluent limitations for chlorine residual and total residual halogens shall be as follows:

- Sample results which show no detectable levels are in compliance with the limit. These test results shall be reported on Wastewater Discharge Monitoring Report Forms as "< 100 µg/L". (Note: 0.1 mg/L converts to 100 µg/L)

- Samples showing detectable traces of chlorine are in compliance if measured at less than 100 µg/L, unless there is a consistent pattern of detectable values in this range. These values shall also be reported on Wastewater Discharge Monitoring Report Forms as "<100 µg/L." The facility operating staff shall record actual readings on logs maintained at the plant, shall take action to determine the reliability of detected results (such as re-sampling and/or calculating dosages), and shall adjust the chemical feed system if necessary to reduce the chances of detects.

- Samples showing detectable levels greater than 100 µg/L shall be considered as exceedances, and shall be reported as measured.

- To calculate average or mass discharge values, a "0" (zero) may be substituted for any test result less than 100 µg/L. Calculated values shall then be compared directly to the average or mass limitations to determine compliance.

5.3.7 Compliance with Phosphorus Limitation

Compliance with the concentration limitation for phosphorus shall be determined as a rolling twelve-month average and shall be calculated as follows:

First, determine the pounds of phosphorus for an individual month by multiplying the average of all the concentration values for phosphorus (in mg/L) for that month by the total flow for the month in Million Gallons times the conversion factor of 8.34.

Then, the monthly pounds of phosphorus determined in this manner shall be summed for the most recent 12 months and inserted into the numerator of the following equation.

$$\text{Average concentration of P in mg/L} = \frac{\text{Total lbs of P discharged (most recent 12 months)}}{\text{Total flow in MG (most recent 12 months)} \times 8.34}$$

The compliance calculation shall be performed each month with a reported discharge volume after substituting data from the most recent month(s) for the oldest month(s). A calculated value in excess of the concentration limitation will be considered equivalent to a violation of a monthly average.

5.3.8 Additives

In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the permit application, the permittee must get a written approval from the Department prior to initiating such changes. This written approval shall provide authority to utilize the additives at the specific rates until the permit can be either reissued or modified in accordance with s. 283.53, Stats. Restrictions on the use of the additives may be included in the authorization letter.

5.4 Land Application Requirements

5.4.1 General Sludge Management Information

The General Sludge Management Form 3400-48 shall be completed and submitted prior to any significant sludge management changes.

5.4.2 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400-49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All sludge results shall be reported on a dry weight basis.

5.4.3 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note**: It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B - Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

5.4.4 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.4.5 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor as specified in s. 283.37(3), Wis. Stats., or a duly authorized representative of the officer, manager, partner or proprietor that has been delegated signature authority pursuant to s. NR 205.07(1)(g)2, Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

5.4.6 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

5.4.7 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

5.4.8 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids X \%solids X \%chloride}}{\text{acres land applied X 100 X 100}} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride X (millions of gallons) X 8.34}}{\text{acres land applied}} = \text{lbs chloride/acre}$$

5.4.9 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits

(consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids X \%solids X \% TKN}}{\text{acres land applied X 100 X 100}} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN X (millions of gallons) X 8.34}}{\text{acres land applied}} = \text{lbs TKN/acre}$$

5.4.10 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

5.4.11 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

5.4.12 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Liquid Wastewater Requirements: The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- By-Product Solids Requirements: The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

5.4.13 Field Stockpiles

The permittee is encouraged to landspread the by-product solids or sludges as they are transported to the fields; but if it becomes necessary to stockpile solids in the fields, the stockpiles shall be spread within 72 hours or as specified in the approved management plan.

5.4.14 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Phosphorus Schedule - Continued Optimization -Optimization	March 31, 2023	17
Phosphorus Schedule - Continued Optimization -Progress Report #2	March 31, 2024	17
Phosphorus Schedule - Continued Optimization -Progress Report #3	March 31, 2025	17
Phosphorus Schedule - Continued Optimization -Progress Report #4	March 31, 2026	17
Phosphorus Schedule - Continued Optimization -Progress Report #5	March 31, 2027	17
Phosphorus Payment per Pound to County -Annual Verification of Phosphorus Payment to County	March 1, 2023	17
Phosphorus Payment per Pound to County -Annual Verification of Payment #2	March 1, 2024	17
Phosphorus Payment per Pound to County -Annual Verification of Payment #3	March 1, 2025	17
Phosphorus Payment per Pound to County -Annual Verification of Payment #4	March 1, 2026	17
Phosphorus Payment per Pound to County -Annual Verification of Payment #5	March 1, 2027	17
Phosphorus Payment per Pound to County -Continued Coverage	See Permit	17
Phosphorus Payment per Pound to County -Annual Verification of Payment After Permit Expiration	See Permit	18
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Report on Effluent Discharges	March 31, 2022	18
Phosphorus Multi-Discharger Variance Interim Limit (0.8 mg/L) -Complete Actions	September 30, 2023	18
Effluent Limitations for E. coli -Status Update	May 21, 2022	18
Effluent Limitations for E. coli -Operational Evaluation Report	November 30, 2022	18
Effluent Limitations for E. coli -Submit Facility Plan	April 30, 2023	19
Effluent Limitations for E. coli -Final Plans and Specifications	March 31, 2024	19
Effluent Limitations for E. coli -Treatment Plant Upgrade to Meet Limitations	September 30, 2024	19
Effluent Limitations for E. coli -Construction Upgrade Progress Report	September 30, 2025	19
Effluent Limitations for E. coli -Complete Construction	March 31, 2026	19
Effluent Limitations for E. coli -Achieve Compliance	April 30, 2026	19
General Sludge Management Form 3400-48	prior to any significant sludge management changes	27

Characteristic Report Form 3400-49	no later than the date indicated on the form	27
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	28
Other Methods of Disposal or Distribution Report Form 3400-52	by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit	29
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	20

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:
Attn: Curt Nickels, Wastewater Engineer
DNR Plymouth Service Center
1155 Pilgrim Road, Plymouth, WI 53073
Email electronic submittals to: Curtis.Nickels@wisconsin.gov